University of Mumbai
Examination 2020

Program: Electronics and Telecommunication Engineering
Curriculum Scheme: Rev2016
Examination: Second Year Semester IV
Course Code: ECC402 and Course Name: Electronic Devices and Circuits - II
Time: 1 hour Max. Marks: 50

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For the students:- All the Questions are compulsory and carry equal marks .

Q1.	For f= 0. Xc = _____.
Option A:	Infinite
Option B:	Zero
Option C:	1/2*pi*R
Option D:	None of the above
Q2.	At Low frequency, RC coupled amplifier works as a _____ pass filter.
Option A:	Low
Option B:	High
Option C:	Band-pass
Option D:	Stop-band
Q3.	To analyse LF response means to find
Option A:	fLCC1
Option B:	fLCC2
Option C:	fLCE
Option D:	All of above
Q4.	AFor ENMOS VTN = 1.7 V, VGS = 2V. Find the region of operation when VDS = 1V.
Option A:	Active region
Option B:	Non - saturation region
Option C:	cutoff region
Option D:	saturation region
Q5.	In D-MOSFET, if a negative voltage is applied at the gate, _____ in _____ will get repelled
Option A:	electron; p-channel
Option B:	electron; n-channel
Option C:	holes; p-channel
Option D:	holes; n-channel
Q6.	In AC output resistance, as VDS goes on increasing, the channel length _____
Option A:	increases
Option B:	decreases
Option C:	remains constant
Option D:	increases linearly
Q7.	In Miller effect, input capacitance _____.
Option A:	decreases

Option B:	increases
Option C:	is unaffected
Option D:	none of the above
Q8.	Different MOSFET's can be fabricated on the same substrate by just changing the _____ ratio.
Option A:	L/W
Option B:	S/N
Option C:	W/L
Option D:	N/S
Q9.	MOSFET stands for
Option A:	Metal Oxide Superconductor Field Effect transistor
Option B:	Metal Oxide Semiconductor Field Effect Transistor
Option C:	Metal Oxide Semiconductor Field effect Transponder
Option D:	none of the above
Q10.	The unseen capacitors in HF are also known as _____ capacitors.
Option A:	stray
Option B:	parasitic
Option C:	ficitious
Option D:	All of the above
Q11.	In which of the following configuration does a MOSFET works as an amplifier?
Option A:	Common Source (CS)
Option B:	Common Gate (CG)
Option C:	Common drain (CD)
Option D:	All of the mentioned
Q12.	In which of the following configuration is the input resistance (Ri) not equal to zero ideally?
Option A:	Common source configuration
Option B:	Common source configuration with source resistance
Option C:	Common gate configuration
Option D:	Source follower configuration
Q13.	Which of the following statement is true about FET?
Option A:	It has high output impedance
Option B:	It has high input impedance
Option C:	It has low input impedance
Option D:	It does not offer any resistance
Q14.	Comparing the size of BJT and FET, choose the correct statement?
Option A:	BJT is larger than the FET
Option B:	BJT is smaller than the FET
Option C:	Both are of same size
Option D:	Depends on application

Q15.	What is the value of current when the gate to source voltage is less than the pinch off voltage?
Option A:	1A
Option B:	5A
Option C:	100A
Option D:	0
Q16.	To use FET as a voltage controlled resistor, in which region it should operate?
Option A:	Ohmic region
Option B:	cut off
Option C:	Saturation
Option D:	cut off and saturation
Q17.	For a p-channel FET, What is the direction of current flow?
Option A:	Source to drain
Option B:	Drain to source
Option C:	Gate to source
Option D:	Gate to drain
Q18.	Which of the following can be considered to be an advantage of FET amplifier as compared to BJT amplifier? A – Higher input impedance B – Good bias stability C – Higher gain-bandwidth product D – Lower noise figure Select the correct answer using the codes given below Codes:
Option A:	A, B and C
Option B:	A, B and D
Option C:	B, C and D
Option D:	A, C and D
Q19.	The pinch off voltage of JFET is 5v. What is its cut off voltage?
Option A:	2.5V
Option B:	3V
Option C:	4V
Option D:	5V
Q20.	The action of JFET in its equivalent circuit can be represented as which of the following?
Option A:	Current controlled current source
Option B:	Current controlled voltage source
Option C:	Voltage controlled current source
Option D:	Voltage controlled Voltage source
Q21.	Which of the following is the main advantage of Self bias?
Option A:	Eliminates the need of two power supply
Option B:	Maximum stability
Option C:	Minimum stability

Option D:	Maximum & Minimum stability
Q22.	At higher frequency, the capacitance of an amplifier circuit is mainly because of which capacitance?
Option A:	Coupling capacitors
Option B:	Stray capacitance
Option C:	Resistors
Option D:	Inductors
Q23.	What is the maximum value of gain of an amplifier?
Option A:	140dB
Option B:	130dB
Option C:	120dB
Option D:	100dB
Q24.	For what type of signals does a transistor behaves as linear device?
Option A:	small signals only
Option B:	large signals only
Option C:	both large and small signal
Option D:	no signal
Q25.	What happens to the h parameters of a transistor when the operating point of the transistor changes?
Option A:	It also changes
Option B:	Does not change
Option C:	May or may not change
Option D:	Nothing happens